

CLAIMS

What Is Claimed Is:

- 5 1. In combination, (1) a thermal printhead and (2) an inkjet printhead, both mounted in an inkjet printer, said inkjet printhead configured for printing inkjet ink to form images on a sheet of print media, said print media including a sealable porous topcoat on an ink-receiving microporous layer, said thermal printhead adapted to seal said sealable porous topcoat by providing a source of
10 heat to said sealable porous surface coat following said printing of images.
- 15 2. The combination of Claim 1 wherein said inkjet printhead is supported and moved on a carriage across a scan axis, along a print zone, perpendicular to a direction of print media advance and wherein said thermal printhead is positioned with said inkjet printhead on said carriage to seal said sealable porous surface coat following printing of said image.
- 20 3. The combination of Claim 1 wherein said thermal printhead comprises:
 - (a) a substrate;
 - (b) a resistive heating element formed on said substrate, said resistive heating element having two opposed ends;
 - (c) two electrical contacts, one contacting each said end of said resistive heating element;
 - (d) two connectors and two conductors, each connector electrically connected to a said electrical contact by a said conductor; and
 - (e) a passivation coating protecting said resistive heating element, said two electrical contacts, and at least a portion of said two connectors.
- 25 4. The combination of Claim 3 wherein said resistive heating element is rectangular.

5. The combination of Claim 3 wherein said resistive heating element comprises a thin film or thick film resistor.

6. The combination of Claim 3 wherein said two electrical contacts may
5 be the same or different and comprise an electrically conducting material.

7. The combination of Claim 3 wherein said two connectors may be the same or different and comprise an electrically conducting material.

10 8. The combination of Claim 3 wherein said two conductors may be the same or different and comprise an electrically conducting material.

9. The combination of Claim 3 wherein said substrate comprises an insulating material.

15 10. The combination of Claim 3 wherein said passivation coating comprises fused glass or silica.

11. In combination, (1) a thermal printhead, (2) an inkjet printhead, both
20 mounted in an inkjet printer, said inkjet printhead configured for printing inkjet
ink to form images on a sheet of print media, and (3) said print media including
a sealable porous surface coat on an ink-receiving microporous layer, said
thermal printhead adapted to seal said sealable porous surface coat by providing
25 a source of heat to said sealable porous surface coat following said printing
of images.

12. The combination of Claim 11 wherein said inkjet printhead is supported and moved on a carriage across a scan axis, along a print zone, perpendicular to a direction of print media advance and wherein said thermal
30 printhead is positioned with said inkjet printhead on said carriage to seal said sealable porous surface coat following printing of said image.

13. The combination of Claim 11 wherein said thermal printhead comprises:

(a) a substrate;

5 (b) a resistive heating element formed on said substrate, said resistive heating element having two opposed ends;

(c) two electrical contacts, one contacting each said end of said resistive heating element;

10 (d) two connectors and two conductors, each connector electrically connected to a said electrical contact by a said conductor; and

(e) a passivation coating protecting said resistive heating element, said two electrical contacts, and at least a portion of said two connectors.

14. The combination of Claim 13 wherein said resistive heating element
15 is rectangular.

15. The combination of Claim 13 wherein said resistive heating element comprises a thin film or thick film resistor.

20 16. The combination of Claim 13 wherein said two electrical contacts may be the same or different and comprise an electrically conductive material.

17. The combination of Claim 13 wherein said two connectors may be the same or different and comprise an electrically conductive material.

25 18. The combination of Claim 13 wherein said two conductors may be the same or different and comprise an electrically conductive material.

30 19. The combination of Claim 13 wherein said substrate comprises an insulating material.

20. The combination of Claim 13 wherein said passivation coating comprises fused glass or silica.

21. The combination of Claim 11 wherein said at least one ink-receiving
5 layer comprises at least one pigment and at least one binder.

22. The combination of Claim 21 wherein said at least one pigment is selected from the group consisting of highly porous silica, alumina, hydrates of alumina, titania, zirconia, base metal oxides, carbonates, glass beads, and hard ball,
10 wherein said at least one binder is selected from the group consisting of gelatin, polyvinyl pyrrolidone, water-soluble cellulose derivatives, polyvinyl alcohol and its derivatives, polyacrylamide, polyacrylic acid, water-soluble acrylic acid co-polymers, and wherein said at least one ink-receiving layer has a porosity within a range of 25 to 28 cm³/m².

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23. The combination of Claim 11 wherein said sealable porous topcoat comprises either a binder selected from the group consisting of gelatin, polyvinyl pyrrolidone, water-soluble cellulose derivatives, polyvinyl alcohol and its derivatives, polyacrylamide, polyacrylic acid, water-soluble acrylic acid co-polymers, or a pigment comprising a film-forming latex, and wherein said topcoat has a pore size in a range of about 4 to 15 nm.
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24. A method for printing inkjet ink on a glossy print media including at least one ink-receiving layer and a sealable porous topcoat thereon, comprising:
25 providing said glossy print media;
 placing said glossy print media in an inkjet printer having at least one inkjet printhead mounted on a movable carriage that moves perpendicular to a motion of travel of said glossy print media through said inkjet printer;
 printing droplets of said inkjet ink on said glossy print media,
30 through said sealable porous topcoat; and

heating said glossy print media to seal said sealable porous top-coat as said print media is being advanced in said printer.

25. The method of Claim 24 wherein a thermal printhead is mounted on
5 said carriage after said inkjet printhead so as to heat said glossy print media af-
ter said printing step.